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WISDOM IS COMMON SENSE TO AN UNCOMMON DEGREE

THE REA LINEMAN

RURAL ELECTRIFICATION ADMINISTRATION U.S. DEPARTMENT OF AGRICULTURE

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POLE-TOP RESUSCITATION SAVES LINEMAN

FOUR SAFE WAYS TO UNLOAD POLES

Unloading poles from a flatcar is extremely hazardous. Four good methods of doing this job are available to co-op linemen. They are:

1. The Illinois safety sling method, published in the Lineman, June 1946.
2. The National Safety Council safety stake method, obtained from the National Safety Council, Chicago, Ill., price twenty-five cents.
3. REA Engineering Memorandum No. 173, July 1946, which is a combination of the Illinois safety sling and the National Safety Council safety stake method.
4. The Oklahoma safety stake and sling method outlined in the new Oklahoma Rural Electric Line Construction Practices manual now available from the A. and M. College Bookstore at one dollar per copy.

It is highly recommended that one of these pole-unloading procedures be adopted by every REA-financed system and followed closely, even to the minor details. Each of these methods

(Continued on Page 4)

UNGROUNDED TRANSFORMER CASES ARE DANGEROUS

In the October 1945 issue of the Lineman a fatal electric shock accident was reported. The man who was electrocuted leaned against a transformer ground wire attached to a pole in a 2400-volt Delta substation. Investigation disclosed that storm damage had severed the transformer ground wire at the ground line and shorted out equipment on the pole so that the severed ground wire was energized.

(Continued on Page 2)

One Demonstration by Training Supervisor Helps Man Revive Friend

Overhead guys were to be installed on a three-phase junction pole. The main feeder line was killed and grounded out. A lineman climbed the pole and belted off above the first phase. He stood straddling the pole on the two neutral dead ends on the south and east side of the pole. He placed his sling rope on the bells of the hot phase, assuming it was dead. The sling rope slipped. As he grabbed for it, he touched the dead-end shoe of the hot phase. The 7200-volt current entered this hand and came out the other hand grasping the dead-end phase wire from the north. It also came out both feet which were on the neutral grounded conductor. The lineman slumped in his belt and hung there. This broke the contact.

The lineman at the base of the pole climbed up and placed the victim on his safety belt and applied pole-top artificial respiration. After a few minutes the victim began to breathe and soon became conscious. The lineman then slowly descended the pole with the injured man still across his belt. Both hands, both feet and one hip were badly burned.

The lineman who saved this man's life credits his sucess to one pole-top resuscitation demonstration put on by the State Job Training and Safety Supervisor.

The account of a successful pole-top resuscitation appeared in the January issue of The Lineman. The above accident occurred too late to be included. It proves conclusively that a demonstration of artificial respiration is the most important instruction which can be given a new man *the first day he reports for work*.

THE REA LINEMAN

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Published Monthly in the Interest of Safety
for Employees of REA-financed Systems
David A, Fleming, Editor

Ungrounded (continued)

The article commented on ground wire hazards, pointing out possible dangers of a transformer ground on a multi-grounded Wye system.

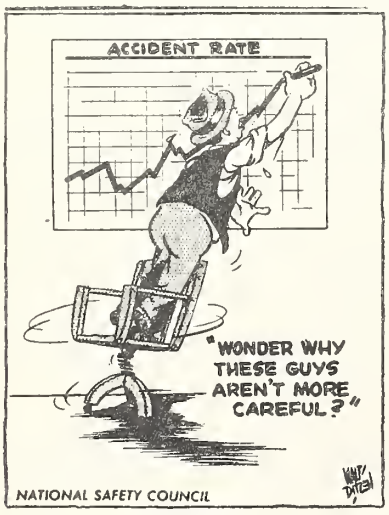
The article merely stated the hazards involved since, at that time, there were no specific accidents to report involving improper grounding practices on multi-grounded Wye systems. O. L. Heath's January bulletin to the Virginia cooperative personnel listed several actual experiences which occurred when transformers on multi-grounded Wye systems had not been grounded according to specifications. A one-bushing transformer has one end of the primary winding fastened to the transformer case. Unless the case is grounded properly, a lineman can put himself in series with the primary winding and thus complete the circuit between primary and ground.

The following instances show the dangers of ungrounded transformer cases on multi-grounded Wye systems:

Recently a lineman was climbing a transformer pole and when approaching the transformer, heard an arc. Stopping, he looked up and discovered that the ground wire on the case of conventional type transformer was loose and the vibration from climbing the pole was causing the ground wire to make momentary contact with the case, causing an arc.

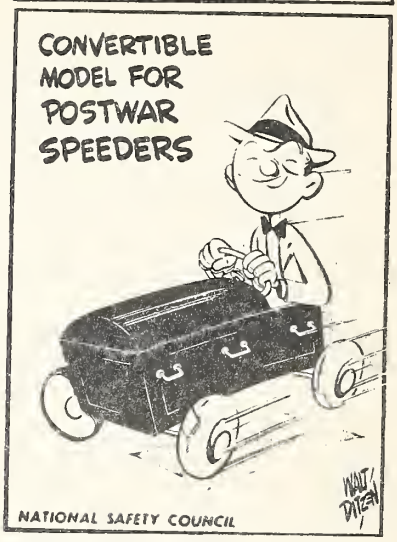
In another instance, the service crew had energized a short 6900 volt tap and connected two or three members. Driving on to the last house, they discovered that the transformer had been hung and made hot but no service wires run to member's house. As this tap had been built by contractor, they did not have necessary material to complete the service to this house and moved on to another job. The next morning a trouble call came in from a member on this tap that service was out. The service crew found the trouble at the last pole on this tap. The pole was burned in two and the transformer was on the ground. Investigation disclosed that the *transformer case had not been grounded* and arcing had occurred between the transformer hanger bolts and the pole, finally burning the pole in two and dropping transformer and line.

In another case, a cooperative lineman attempted to ground the case of a transformer *after* the high side bushing had been made hot, and received a severe shock.



The office force can profit by attending your Job Training and Safety Meetings

"TAKE IT EASY"



Highway Accidents are increasing.

NEW MEN TAKE OVER

The Kansas job training and safety program has employed Joe Staff as State supervisor. His address will be c/o State Supervisor of Trade and Industrial Education, Topeka, Kansas.

ARE YOUR RUBBER GLOVES REALLY SAFE?

Extensive Experiment Reveals Definite Need for Regular Testing of all Rubber Gloves

Printed on this page is a table showing the results of the testing of 2,011½ pairs of lineman's rubber gloves. This table represents all gloves received over a 12-month period by one testing laboratory. One hundred thirty-four single gloves (3.4% of the total gloves received) were determined to be unfit for testing and were rejected for testing, 142 single gloves (3.6% of all gloves received) broke down under test, and 3,747 single gloves (93% of the total gloves received) passed both visual and electrical tests and were certified as safe to be used again.

Since 3.4% of the gloves were unfit for testing and an additional 3.6% of the gloves broke down under test, it is evident that 7% of the gloves should not have been used by linemen. Linemen using these gloves prior to the test were fortified by a false sense of security. This emphasizes the need for a well-planned rubber glove testing program.

In setting up such a program, it is first necessary to determine the interval between tests. Some co-ops have adopted a 60-day period, while others have found 90 days to be satisfactory. Since both of these intervals have proved satisfactory, we believe that the important consideration is not which interval is chosen but rather how consistently the plan is followed

To be satisfactory, a routine should be established so that the gloves will be sent in for test on time and tested gloves will be available to exchange with the lineman for the gloves which are to be tested.

Testing procedure is a routine matter. For that reason it is better to make it the responsibility of a member of the office force rather than to make it the responsibility of the manager or foreman. Rubber identification stickers can be cemented to the gloves at the top of the cuffs. These stickers are numbered and can be imprinted with the system name. Numbered identification stickers are helpful in keeping a card record for test routine and also can be assigned to individual linemen so that they may identify their own gloves. It is recommended that two pairs of gloves be purchased for each individual who regularly has use for them, plus a few extra pairs as a reserve in the storeroom and one or two spare pairs on each line truck, depending on the size of the crew.

RUBBER GLOVE TESTING FOR THE YEAR 1946

MONTH	TOTAL NO. OF GLOVES	PASSED	HAND		PUNCTURED	HAND		GLOVES NOT IN CONDITION TO TEST	HAND	
January	251	223	114R	109L	22	9R	13L	6	3R	3L
February	293	276	138R	138L	10	5R	5L	7	3R	4L
March	331	316	158R	158L	6	1R	5L	9	5R	4L
April	200	181	89R	92L	8	4R	4L	11	7R	4L
May	470	438	221R	217L	11	3R	8L	21	10R	11L
June	328	295	148R	147L	14	7R	7L	19	10R	9L
July	347	319	159R	160L	21	12R	9L	7	4R	3L
August	443	427	212R	215L	6	3R	3L	10	8R	2L
September	316	303	152R	151L	8	6R	2L	5	1R	4L
October	344	324	164R	160L	8	2R	6L	12	6R	6L
November	417	374	191R	183L	20	12R	8L	23	6R	17L
December	283	271	137R	134L	8	4R	4L	4	1R	3L
Total	4023 (2011½ prs)	3747	1883R	1864L	142	68R	74L	134	64R	70L

Lineman Fatally Hurt In Pole-Unloading Mishap

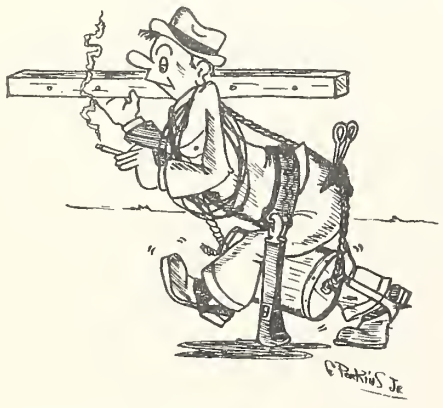
Another pole-unloading accident has claimed the life of a lineman on an REA-financed system. Here is how the accident happened:

One hundred, 40-foot, class-5 poles were received, loaded on a flatcar. The top layer of poles was held together with steel bands. In addition to this, three steel bands encircled the entire load and three wooden stakes were fitted in the pockets on each side of the car.

A line crew consisting of a foreman and four men were sent out with a winch truck to unload these poles. Skids were placed on the north side of the car. The middle stake was removed from its pocket and the other two stakes were notched but not entirely cut.

Next, two of the three steel bands around the top layer of poles were cut. Then the middle band of the three steel bands circling the entire load was cut and the other two bands cut two-thirds through. A ladder was placed at one end of the car on the south side (The poles were to be unloaded on the north side). A member of the crew climbed the ladder to cut the top band on the stake at the east end of the car. When this band was cut, the stakes on both sides of the car broke. The man halfway up the ladder attempted to get down and run. He was caught by the heels and thrown on his back. Twelve poles rolled upon him, covering him from feet to chin. He died in the hospital two hours later.

HARD LUCK HARRY



Invention #13984 36XYZ2B

Empty nail keg guaranteed to keep ankles far enough apart to prevent Gaff Accidents while walking, running or jumping with spurs on. To drive truck - place one foot inside Keg.

DERE EDDITTER —

Your directions for getting down pole came too late. I needed a new pair of pants anyway and Ma says there is enough of the shirt sleaves left to cut off and make a summer shirt. We got out about a quart of splinters and Ben says that the rest will work out in time. Your suggestion about a block and tackle at the pole top sounds good but Ben made me promise to take the outfit home and leave it till he is ready to teach me. Of course I can wear them around home evenings to sorta get the feel of 'em. It attracts a lotta attention from the neighbors too. So I decided to impress that new girl that just moved in up the street. She wouldn't pay me no mind and I was goin' to show her who she was hi hatten. So, as she went by one evening I steps out from the side of the house with a piece of wire in one hand an rattling the safety snaps with the other to get her attention. I was lookin' up at the top of the big tree in the front yard -- just like I was going to climb it. All of a sudden a spur caught in my pant leg and I fell flat on my face. When I got up she was gone, my pant leg was tore and there was a big jagged gash in my leg. What I want to know is -- is there any way to walk with hooks on without chewin' your self up? I. M. Numan

Dear Mr. Numan:

A careful survey of our accident files discloses the dire need for a safe method of walking, running, jumping (especially across ditches) and driving a truck while wearing hooks. We turned this knotty problem over to Hard Luck Harry since all of the other experts we talked to on this matter merely threw up their hands and passed out. Hard Luck Harry is made of sterner stuff and came right back with the first workable method we have ever seen for performing these activities with any degree of safety. The Editor

Four Safe Ways (continued)

provides a means of binding the poles securely while bands and stakes are being removed. Each makes it possible for all workmen to get clear of the danger areas around the car before the poles are released. The man operating the truck determines the exact instant that the poles start to roll off the car. The poles are under the complete control of the operator from the time they start to roll from the car until the last pole has reached the ground.